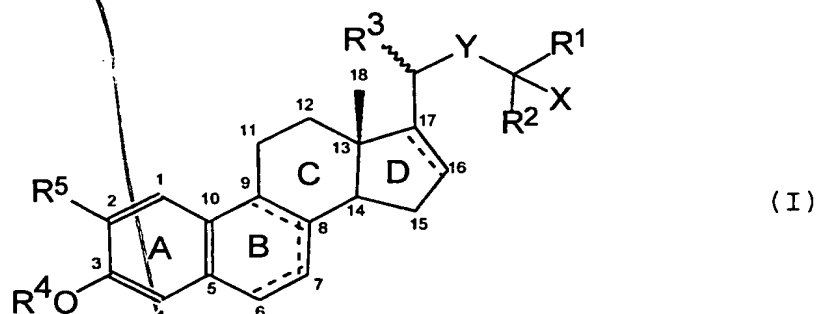


Claims:

1. Compounds of formula (I)



in which:

R^1 and R^2 , which may be the same or different, each represents a lower alkyl, alkenyl or alkynyl group;

R^3 represents a methyl group having α - or β -configuration;

R^4 represents a hydrogen atom or an etherifying or esterifying group;

R^5 represents a hydrogen atom, a hydroxyl group or a lower alkoxy group;

X represents a group OR^4 , wherein R^4 is as defined above, or a group NR^6R^7 wherein R^6 represents a hydrogen atom, an aliphatic or araliphatic organic group, or an acyl group comprising an aliphatic, araliphatic or aryl organic group linked to the nitrogen atom by way of a carbonyl group; and R^7 is a hydrogen atom or a lower alkyl group;

Y represents a lower alkylene, alkenylene or alkynylene group optionally substituted by a hydroxyl, etherified hydroxyl or esterified hydroxyl group; and

the dotted lines signify that double bonds may be present at the 16(17)-position and/or either at the 6(7)- and 8(9)-positions or at the 7(8)-position.

2. Compounds of formula (I) as claimed in claim 1

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wherein R^1 and R^2 are independently selected from C_{1-6} alkyl groups and C_{2-7} alkenyl and alkynyl groups.

3. Compounds of formula (I) as claimed in claim 2
5 wherein R^1 and R^2 are straight chain groups.

4. Compounds of formula (I) as claimed in claim 2
wherein R^1 and R^2 are selected from methyl, ethyl and propargyl groups.

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5. Compounds of formula (I) as claimed in any of the preceding claims wherein R^4 a hydrogen atom, a silyl group, a C_{1-6} alkyl group optionally interrupted by one or more oxygen atoms or substituted by a lower cycloalkyl group, a cyclic ether group, a C_{1-6} alkanoyl group, an aroyl group, a C_{1-6} alkane sulphonyl or halogenated methane sulphonyl group, or an arene sulphonyl group.

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6. Compounds of formula (I) as claimed in claim 5 wherein R^4 is a hydrogen atom.

7. Compounds of formula (I) as claimed in claim 5 wherein R^4 is a metabolically labile group or a lower
25 alkyl group.

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8. Compounds of formula (I) as claimed in any of the preceding claims wherein R^5 represents a hydrogen atom or a methoxy group.

9. Compounds of formula (I) as claimed in any of the preceding claims wherein X represents a hydroxyl group or a group of formula NR^6R^7 wherein:

35 R^6 is a C_{1-6} alkyl group, C_{6-12} carbocyclic aryl C_{1-4} alkyl group, C_{1-6} alkanoyl group, C_{6-12} carbocyclic aryl C_{2-5} alkanoyl group, C_{7-13} carbocyclic aroyl group or any of the preceding groups substituted by one or more halo,

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C₁₋₄ alkyl, C₁₋₄ alkoxy, C₁₋₄ alkanoyl, C₁₋₄ alkylamino, di(C₁₋₄ alkyl)amino, nitro, carbamoyl or C₁₋₄ alkanoylamino substituents; and

R⁷ is a hydrogen atom or a C₁₋₆ alkyl group.

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10. Compounds of formula (I) as claimed in claim 9 wherein X represents a hydroxyl, amino, methylamino, ethylamino, N-ethyl-N-methylamino, acetylamino, benzamido or phenylacetylamino group.

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11. Compounds of formula (I) as claimed in any of the preceding claims wherein Y contains up to 7 carbon atoms and up to 3 multiple bonds.

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12. Compounds of formula (I) as claimed in claim 11 wherein Y is a straight chain C₂₋₆ group.

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13. Compounds of formula (I) as claimed in any of the preceding claims wherein Y is substituted by a hydroxyl, etherified hydroxyl or esterified hydroxyl group positioned α -, β - or γ - to the group -C(R¹)(R²).X or α - to any triple bond present in the group Y.

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14. Compounds as claimed in claim 11 wherein Y is selected from ethylene, trimethylene, tetramethylene, vinylene, buta-1,3-dienylene, prop-2-ynylene and 1-hydroxyprop-2-ynylene.

30

15. Compounds of formula (I) as claimed in claim 1 wherein:

R¹ and R², which may be the same or different, each represents a lower alkyl group;

R⁵ represents a hydrogen atom; and

X represents a group NR⁶R⁷ wherein R⁷ is hydrogen.

35

16. The compounds:

25-acetylamino-3-hydroxy-24-homo-19-nor-cholest-
1,3,5(10),16-tetraene;

5 25-ethylamino-3-hydroxy-24-homo-19-nor-cholest-
1,3,5(10),16-tetraene;

25-methylamino-3-hydroxy-24-homo-19-nor-cholest-
1,3,5(10),16-tetraene;

10 25-dimethylamino-3-hydroxy-24-homo-19-nor-cholest-
1,3,5(10),16-tetraene;

25-(N-ethyl-N-methylamino)-3-hydroxy-24-homo-19-
nor-cholest-1,3,5(10),16-tetraene;

25-acetylamino-3-methoxy-24-homo-19-nor-cholest-
1,3,5(10),16-tetraene;

15 25-acetylamino-3-ethoxy-24-homo-19-nor-cholest-
1,3,5(10),16-tetraene;

25-acetylamino-3-isobutoxy-24-homo-19-nor-cholest-
1,3,5(10),16-tetraene;

20 25-benzamido-3-hydroxy-24-homo-19-nor-cholest-
1,3,5(10),16-tetraene;

25-phenylacetylamino-3-hydroxy-24-homo-19-nor-
cholest-1,3,5(10),16-tetraene;

25-acetylamino-3-hydroxy-24-homo-19-nor-cholest-
1,3,5(10)-triene;

25 3,24-dihydroxy-24-propargyl-19-26,27-trisnor-
cholest-1,3,5(10)-triene;

2-methoxy-3,24-dihydroxy-24-propargyl-19,26,27-
trisnor-cholest-1,3,5(10)-triene;

30 3,24-dihydroxy-20-epi-24-propargyl-19,26,27-
trisnor-cholest-1,3,5(10)-triene;

3,24-dihydroxy-24,24-bispropargyl-19-nor-chol-
1,3,5(10),22-tetraene;

2-methoxy-3,24-dihydroxy-24,24-bispropargyl-19-nor-
chol-1,3,5(10),22-tetraene;

35 3,24-dihydroxy-20-epi-24,24-bispropargyl-19-nor-
chol-1,3,5(10),22-tetraene;

3-hydroxy-25-amino-26,27-bishomo-19-nor-cholest-

- 1,3,5(10)-trien-23-yne;
2-methoxy-3-hydroxy-25-amino-26,27-bishomo-19-nor-
cholest-1,3,5(10)-trien-23-yne;
3-hydroxy-20-epi-25-amino-26,27-bishomo-19-nor-
5 cholest-1,3,5(10)-trien-23-yne;
3-hydroxy-25-amino-26,27-bishomo-19-nor-cholest-
1,3,5(10)-triene;
2-methoxy-3-hydroxy-25-amino-26,27-bishomo-19-nor-
cholesta-1,3,5(10)-triene;
10 3-hydroxy-20-epi-25-amino-26,26-bishomo-19-nor-
cholesta-1,3,5(10)-triene;
3-hydroxy-25-acetylamino-26,27-bishomo-19-nor-
cholest-1,3,5(10)-trien-23-yne;
2-methoxy-3-hydroxy-25-acetylamino-26,27-bishomo-
15 19-nor-cholest-1,3,5(10)-trien-23-yne;
3-hydroxy-20-epi-25-acetylamino-26,27-bishomo-19-
nor-cholest-1,3,5(10)-trien-23-yne;
3,22-dihydroxy-25-amino-26,27-bishomo-19-nor-
cholest-1,3,5(10)-trien-23-yne;
20 2-methoxy-3,22-dihydroxy-25-amino-26,27-bishomo-19-
nor-cholest-1,3,5(10)-trien-23-yne;
3,22-dihydroxy-20-epi-25-amino-26,27-bishomo-19-
nor-cholest-1,3,5(10)-trien-23-yne;
2-methoxy-3-hydroxy-24-homo-25-acetylamino-19-nor-
25 cholest-1,3,5(10),16-tetraene;
2-methoxy-3-hydroxy-24-homo-25-amino-19-nor-
cholest-1,3,5(10),16-tetraene;
2-methoxy-3-hydroxy-25-acetylamino-19-nor-cholest-
1,3,5(10),16-tetraene;
30 2-methoxy-3-hydroxy-25-amino-19-nor-cholest-
1,3,5(10),16-tetraene;
3-hydroxy-24-homo-25-acetylamino-19-nor-cholest-
1,3,5(10),6,8,16-hexaene;
3-hydroxy-24-homo-25-amino-19-nor-cholest-
35 1,3,5(10),6,8,16-hexaene;
3,25-dihydroxy-19-nor-cholest-1,3,5(10)-
trien-23-yne;

3,25-dihydroxy-19-nor-cholest-1,3,5(10)-triene;
2-methoxy-3,25-dihydroxy-19-nor-cholest-1,3,5(10)-
trien-23-yne;

3,25-dihydroxy-20-epi-19-nor-cholest-1,3,5(10)-
5 trien-23-yne;
2-methoxy-3,25-dihydroxy-19-nor-cholest-1,3,5(10)-
triene;

3,25-dihydroxy-20-epi-19-nor-cholest-1,3,5(10)-
triene;

10 3,25-dihydroxy-24,24a-bishomo-19-nor-cholest-
1,3,5(10),22,24(24a)-pentaene;

25-amino-3-hydroxy-20-epi-24-homo-19-nor-cholest-
1,3,5(10),16-tetraene;

25-acetylamino-3-hydroxy-20-epi-24-homo-19-nor-
15 cholest-1,3,5(10),16-tetraene;

25-amino-3-hydroxy-20-epi-19-nor-cholest-
1,3,5(10),16-tetraene;

25-acetylamino-3-hydroxy-20-epi-24-homo-19-nor-
cholest-1,3,5(10),16-tetraene;

20 3-hydroxy-24-homo-25-acetylamino-19-nor-cholest-
1,3,5(10),6,16-pentaene; and

3-hydroxy-24-homo-25-amino-19-nor-cholest-
1,3,5(10),6,16-pentaene.

25 17. Active compounds of formula (I) as claimed in any
preceeding claim for use in management of neoplastic
disease; as agents to promote wound healing; in burn
management; in treatment of bone diseases, autoimmune
disease, host-graft reaction, transplant rejection,
30 inflammatory diseases, neoplasias or hyperplasias,
myopathy, enteropathy or spondylitic heart disease; in
suppression of parathyroid hormone; in treatment of
dermatological diseases, hypertension, rheumatoid
arthritis, psoriatic arthritis, secondary
35 hyperparathyroidism, asthma, cognitive impairment or
senile dementia; in fertility control in either human or
animal subjects; in management of disorders involving

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blood clotting; or in reduction of serum cholesterol.

18. The use of an active compound of formula (I) as claimed in any one of claims 1 to 16 for the manufacture of a medicament for use in management of neoplastic disease; as an agent to promote wound healing; in burn management; in treatment of bone diseases, autoimmune disease, host-graft reaction, transplant rejection, inflammatory diseases, neoplasias or hyperplasias, myopathy, enteropathy or spondylitic heart disease; in suppression of parathyroid hormone; in treatment of dermatological diseases, hypertension, rheumatoid arthritis, psoriatic arthritis, secondary hyperparathyroidism, asthma, cognitive impairment or senile dementia; in fertility control in either human or animal subjects; in management of disorders involving blood clotting; or in reduction of serum cholesterol.

19. Pharmaceutical compositions comprising an active compound of formula (I) as claimed in any one of claims 1 to 16 in admixture with one or more physiologically acceptable carriers or excipients.

20. A method of treatment of a human or animal subject in the management of neoplastic disease; to promote wound healing; in burn management; in treatment of bone diseases, autoimmune disease, host-graft reaction, transplant rejection, inflammatory diseases, neoplasias or hyperplasias, myopathy, enteropathy or spondylitic heart disease; in suppression of parathyroid hormone; in treatment of dermatological diseases, hypertension, rheumatoid arthritis, psoriatic arthritis, secondary hyperparathyroidism, asthma, cognitive impairment or senile dementia; in fertility control; in management of disorders involving blood clotting; or in reduction of serum cholesterol, which method comprises administering to said subject a therapeutically effective amount of an

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active compound of formula (I) as claimed in any of claims 1 to 16.

- 5 21. A process for the preparation of a compound of formula (I) as defined in claim 1 which comprises reacting a compound containing a precursor for the desired 17-position side chain in one or more stages and with one or more reactants serving to form the said desired 17-position side chain, followed if necessary and/or desired by removal of any O-protecting group.
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